

SPRINGS ARE IMPORTANT FACTOR TO AUTOMOBILE

Complaints of Average Car Might Be Attributed to Neglect.

"Many complaints about the average car can be traced to the neglect of the springs," declares H. M. Fitzgerald, manager for Harper Motor Company, Inc., local dealer in Durant four and six-cylinder models. "Hard riding, squeaks and rattles, excessive side-sway, occasional spring breakage, hard steering and locked brakes come of this neglect."

"Springs perform very definite functions. They soften and scatter road shocks and hold the axle in alignment, thereby have considerable influence on the steering, wheel alignment, tire wear, and to a degree, side-sway. In certain cars the driving effort and the braking reaction are transmitted to the frame through the springs."

"Lack of lubrication may make the springs too stiff, and cause hard riding. Comparative little oiling is needed to offset rust due to entrance of water. In keeping the springs flexible, however, excessive lubrication may reduce the friction to the extent that the springs may become too lively."

"Spring breakage is caused by loose axle ends, incorrect heat treatment, fatigue of metal, bent shackles and incorrect design and not by rust, as many suppose. In fact, rust seldom causes a spring to break, for a rusty spring acts as a solid mass and when it cannot deflect, it is not likely to break, unless possibly under a very severe shock when it may snap off at the outer end of its main leaf or plate."

"However, if the spring is an old one, or has settled more than about one inch, it is more advisable to get a new spring rather than only the broken leaves."

"A periodical spring inspection followed by regular adjustment will assure easy riding."

AUTO INDUSTRY FACTOR IN RAILROAD REVIVAL

Heavy Shipping of Motor Cars, Parts, Steel and Road Material.

"Shipping of assembled automobiles from main factories and assembling plants during the past year reached the record figure of approximately 400,000 cars, transporting 1,700,000 machines," as reported by William E. Metzger, chairman, traffic committee, National Automobile Chamber of Commerce, to the directors' meeting of that association recently. In addition to this, over 750,000 machines were driven away by dealers from factories and assembling plants."

"Manufactured parts will amount to about 100,000 carloads, and it is not unlikely that this heavy shipping will place automobile and parts third in number of carloads of manufactured articles shipped on the railroads. In 1921, it ranked fourth, being exceeded only by refined petroleum, iron and steel products, and cement. Much of the refined petroleum and a considerable part of cement and iron and steel shipping, however, is the direct result of motor car manufacture and use."

"Eighteen thousand new box cars with extra wide door openings, known as automobile cars, have been included in railway equipment orders during the past year, which will bring the total of such cars in service up to 111,000. Notwithstanding this, automobile car supply became inadequate to handle the heavy production. Driving over the highways increased, as did the use of open freight cars. By these expedients the product was moved with fair promptness, and dealers have been kept supplied."

EXPECT INTERNATIONAL COMMUNICATION BY HAMS

New System of Calls Must Be Worked Out to Avoid Trouble.

Regular international communication among amateurs is looked upon as so dear a thing that already plans are being discussed for a unified system of call signs throughout the world.

The present method of communicating among amateurs is efficient only as it is confined to one country. But let an amateur of one land try to call one of another country, and there is confusion.

This is because of the similarity in divisional call numbers allotted to the districts of each country. For example, the United States has nine radio districts. Each amateur is allotted a call letter which he has to use in communication with the number of his district. 2XAK, for instance, is amateur NAK in district 2. 8BK is BK in district 8. If the first wants to call the other he signs 8BK de 2XAK.

But amateurs in England also have the number 2 before their call letters. And those in France have number 8 preceding their individual call letters.

So that with transatlantic communication established, if the signal 8BK de 2XAK is flashed, four possible calls might be meant. District 2 in America might be calling France, England might be calling district 8 in America, or district 2 in America might be calling district 8 in the same country.

This possibility of confusion in amateur calls has aroused the American Radio Relay League, the American amateur organization—to seek an international system of amateur calls. French amateurs also are considered a plan and they have appointed a commission to devise some system by which no confusion in international calls could be possible.

Several plans have been suggested, but none has been approved. Some of these are objectionable because of the large amount of work and expense they would entail in the process of changing the amateur calls already allotted. Others could not be found elastic enough to include future possibilities in radio calls.

TODAY'S RADIO

KDKA.
(East Pittsburgh.)
10:45 A. M.—Services of the East 12nd Christian Church, Rev. John Hay Ewers, in the pulpit.
2:45 P. M.—Children's Bible Story by Rev. W. A. Logan, of the Alpha Lutheran Church.
3 P. M.—Handel's "Messiah," to be given by prominent soloists, together with chorus, with KDKA Little Symphony Orchestra.
4:45 P. M.—Vesper Services of the Shady Side Presbyterian Church, Rev. Hugh Thompson Kerr, pastor.
6:15 P. M.—Special concert for the children, by the KDKA Little Symphony Orchestra, Victor Saudek, director.
7:30 P. M.—Services of the Valley Episcopal Church, Shady Avenue, Pittsburgh, Pa., Rev. E. J. van Ethen, rector.
Midnight—A special Christmas service. Program will be announced in next week's issue of Radio Broadcasting News.

WJZ.
(Newark, N. J.)
10:30 A. M.—Musical program.
11 A. M.—Morning services and sermon at St. Thomas Church, Fifth Avenue and Fifty-third Street, New York City.
1 P. M.—Radio chapel services conducted by Rev. Harry E. Pondick, of the First Presbyterian Church, New York City.
2:40 P. M.—"Something for Everybody," copyrighted stories by the Youth's Companion.
6:30 P. M.—Readings and Records from the Bible Books That Sing," by Ralph Mayhew.
7 P. M.—"Is There a Santa Claus?" by Jacob Rius, reading.
7:50 P. M.—"Heaven" by Hugh Black, Union Theological Seminary, New York City.
7:45 P. M.—Bible organ recital from the Estey Auditorium, New York City.
8 P. M.—Special Christmas program to be announced later.

KW.
(Chicago, Ill.)
8:30 P. M.—Radio chapel services conducted by Rev. John Henry Henskins, of the Episcopal Church of the Redeemer.

WWJ.
(Detroit, Mich.)
11 A. M.—Church services from St. Paul's Cathedral.

NEW YORK POLICE USE RADIO TO ENTERTAIN

NEW YORK, Dec. 23.—The radio transmitting set owned and operated by the New York police department is not limited to broadcasting information for the apprehension of criminals and the recovery of stolen property alone.

For Police Commissioner Enright announces he will furnish an entertainment program on Christmas. "The program will be highly instructive and enjoyable," says M. H. Brennan, superintendent of police telegraph.

So, you radio listeners, who are within range of New York, tune in on WJAW—36 meters—for a Christmas entertainment.

VETERAN CARS SCORE RELIABILITY RECORDS

Studebakers, Previously Driven 1,333,403 Miles, Make Remarkable Showing.

A remarkable test of motor car economy and reliability in which nine veterans of motordom participated, was recently held on the Pacific Coast. All nine cars were Studebaker big sixes. Prior to the contest, they had covered, in everyday service, a total of 1,333,403 miles—an average of 148,156 miles per car.

Before the run the two "patriarchs" among the nine contestants showed mileage records of 230,000 and 251,000 miles, respectively. The minimum mileage shown on the speedometer of any of the cars was 62,007 miles. The contest stands as the first of its kind ever held and proved a practical and convincing demonstration of motor car stamina, reliability and economy.

The course of the run was from Los Angeles to Big Bear Valley and return, a distance of 229 miles, of which ninety miles were over steep, rough mountain roads that necessitated stamina in every part. Each of the veteran cars reached every checking station on time and only two failed of perfect scores, one having dirt in the gasoline pipe and the other requiring a slight adjustment of the brakes.

The veteran cars were taken from everyday service to enter the contest and were returned to their owners immediately after the run. Easily enough, the two cars which had covered a mileage of 230,000 and 251,000 miles respectively had

been subjected to perhaps the most severe service of any of the nine in the contest. These cars make two round-trips daily between Los Angeles and Santa Barbara. Both registered perfect scores in the contest of veterans.

The car with the 250,000-mile record took second honors in economy among the nine competing. The highest economy record was scored by a Big-Six which had 25,000 miles to its credit.

NEW SALES DIRECTOR FOR THE CHALMERS

Arthur E. Baker, vice-president of the Chalmers Motor Car Company, has announced the appointment of J. E. Fields as director of sales for Chalmers cars. Mr. Fields comes to the Chalmers organization with a long and valuable experience in the distribution of motor cars.

For the past fourteen years he has been directly associated with motor car distribution and is said to have one of the largest acquaintanceships among automobile dealers in the entire industry. Prior to his entrance into the motor car industry, he was for a number of years engaged in farm implement sales work.

It is an interesting coincidence that Mr. Fields began his automobile career with the car of which he now manages the sales management.

AUTO DEALERS READY FOR ANNUAL MEETING

ST. LOUIS, MO., Dec. 23.—Business administration and other subjects of exceptional interest to automobile business men will comprise the program for the 1923 sixth annual convention of the National Automobile Dealers' Association in Chicago, Jan.

MOON

To Our Patrons, Friends and the Good World at Large,
We Wish You a

Merry Christmas
and a
Happy New Year

Baughan Motor Sales Co.,

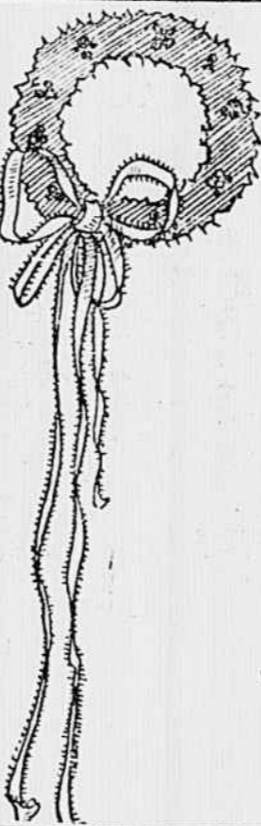
Incorporated
114 West Broad.



AMONG our assets we like to count the only one that money cannot buy—your good-will. And so at this Holiday Season we extend to you—not as a customer alone, but as a friend—the Best of Wishes for the coming year.

Universal Service Station

2013 W. Broad Street. Boul. 2930.



May
the Light of
Happiness
Shine on
You and Yours
This
Christmas Day

Jones Motor Car Co., Inc.
1651 West Broad.

Merry Christmas

A. R. TILLER

LEXINGTON DISTRIBUTOR,

1308 W. Broad.

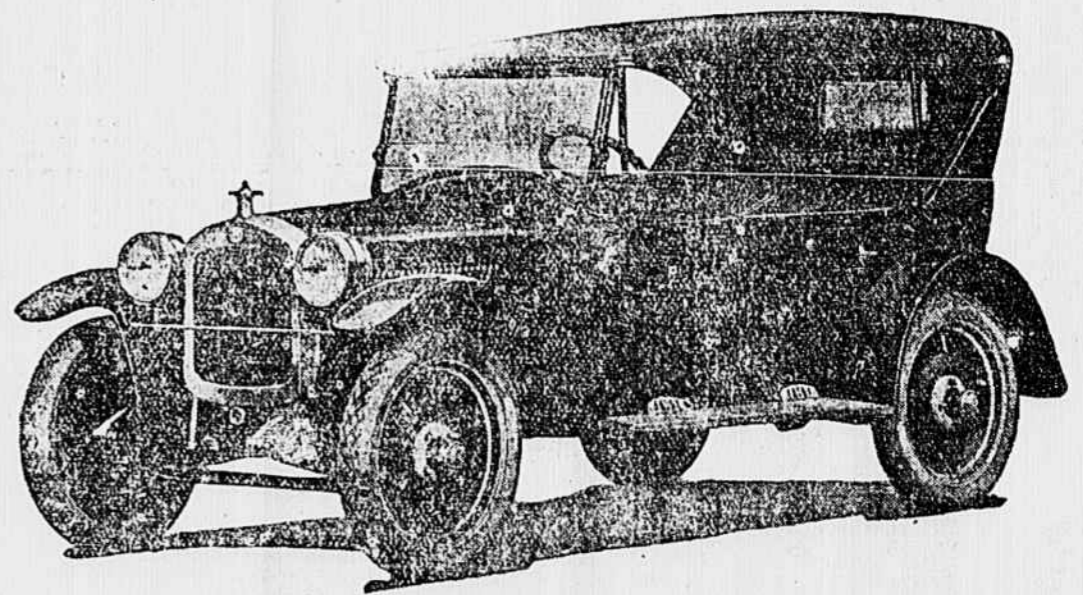
Boul. 81.



Here's Wishing
My Friends
A MERRY XMAS
and
A HAPPY
NEW YEAR

Clark
THE FORD MAN

608 West Broad Street.
Newly Authorized Service and Repair Dealer.
"Where Your Car Gets MY Personal Attention."



Hupmobile Special Reflects Brilliant Performance

This Hupmobile Special Touring—as well as the Special Roadster,—truly reflects the brilliant, dashing performance for which the Hupmobile is noted.

Disc wheels; special brown top; aluminum scuff-plates on running board; nickel-plated radiator, cowl lamps, and barrel headlamps, are some of the items which give the Special a smarter style.

The Roadster, in addition to these high class features, is also supplied with nickel-plated bars on the rear deck, and a tilted tire carrier.

Both the Special Touring and

the Special Roadster, are priced \$1250, f. o. b. Detroit.

We believe that those who demand a moderate departure from the strictly conventional, will welcome these two Hupmobile Specials.

Satisfaction with the more distinguished appearance of these models must always be secondary, however, to the deeper, satisfaction which has its roots in the remarkably low cost, reliable service which the Hupmobile gives over a long period of years.

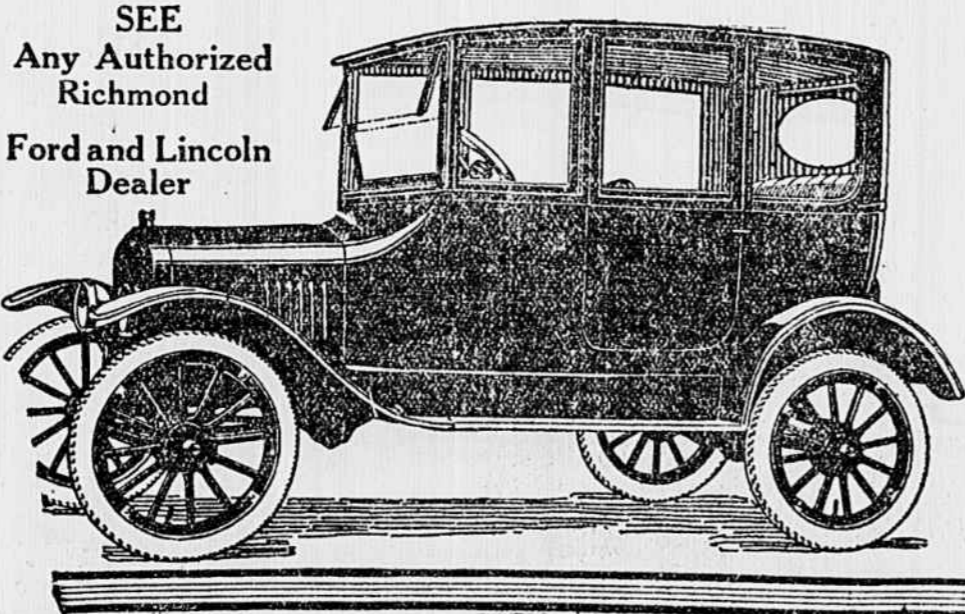
Come in and see these Hupmobile Specials,—ride in them—drive them. Or, better still, let us come to your home or office for a demonstration. Phone now.

ANDERTON AUTOMOBILE CO., Inc.

1837 West Broad Street.

Boulevard 638.

Hupmobile



Richmond Motor Co., Inc. Kirkmyer Motor Co.
Universal Motor Co., Inc. Hearn Motor Co., Inc.